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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/006,987 | 12/10/2001 | Takayuki Nomoto | 041514-5162 | 2829 |

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EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT PAPER NUMBER

2627

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------------------------|-------------------------------|--|
| Office Action Summary | Application No. 10/006,987 | Applicant(s) NOMOTO ET AL. | |
| | Examiner Aristotelis M. Psitos | Art Unit 2627 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Applicants' response of 2/22/06 has been considered with the following results.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1 and 3 are rejected under 35 U.S.C. 103 (a) as being obvious over WO 00/65584 and further considered with either JP 10-320835 or Watabe.

Although the examiner is relying upon the WO document, the examiner is only providing a copy of the US patent equivalent as an English translation of such a document

The following analysis is made:

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Claim 1

WO 00/65584 (US 6512735)

An optical disc

comprising an information recording layer

see abstract/title

where information is recorded as an array

see col. 1 line 19 -

of pits at a predetermined track pitch, and

a light transmitting layer formed on said

information recording layer and having a

film thickness of 0.13 mm or less,

the information recorded therein being

col. 2 line 4

reproduced upon irradiation of a beam of

light having a wavelength ranging from

400 nm to 415 nm onto said information

recording layer through said light transmitting

layer from an objective lens having a numerical

aperture ranging from 0.75 to 0.86,

wherein a taper angle of said pits is in a range

see secondary references

of 80 degrees to 90 degrees.

With respect to the wavelength, thickness and numerical aperture limitations of claim 1, applicants' attention is drawn to the col. 1 line 29 to col. 2 lines 4, which discloses such limitations.

Although the document does describe a tapered angle range, the specified range is not clearly depicted.

JP 10-320835 describes in this environment the ability of varying the tapered angle range of the pit as necessary – see either the abstract, or the attached MAT (machine assisted translation) of the JP document starting at paragraphs 17-19 for instance, and also starting at paragraph 46 – plus.

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Alternatively, Watabe col. 6 lines 3-39 also depict a range that meets the claimed limitation.

It would have been obvious to modify the base system with the teaching from either of the secondary references, motivation is as discussed in the secondary references, motivation is as taught by the references for either the ability of increasing the density of the information onto the limited space of the record medium and or as know to those of ordinary skill in the art, the tradeoffs between c/n - cross talk between tracks.

With respect to the limitations of claim 3, such is considered inherently present –see the description of the tapered angle in the base reference for instance.

Response to Arguments

Applicants' arguments have been considered but are not deemed persuasive. Applicants' arguments are drawn to the disclosure with respect to the prevention of gain fluctuation of the te signal obtained by the phase-difference method in an optical disc system. The examiner does not challenge such disclosure, however, because NONE of these limitations are present in the claims, no rebuttal is necessary.

In addition, applicants' argument with respect to the JP10-320835 document is also not persuasive, since the claimed angular limitation is indeed present – see for instance paragraph 18 of the mat, which explicitly recites a range of the taper angle of greater than 60 degrees, and additionally of greater than 80 degrees.

Finally, as far as the examiner can ascertain from the above argued (not claimed) limitations, such are a direct result of the product limitation(s). Since the product limitations are met by the above references, then the argued (not claimed) limitations would necessarily follow, else there is another undisclosed and claimed limitation yielding such.

2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1 and 3 above, and further in view of Sugaya et al.

Sugaya et al discloses in this environment the ability of having an angled tapered wall for the pits, as well as the establishment of the track pitch within the range cited.

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It would have been obvious to modify the base system of the WO reference with the above teaching from Sugaya et al, motivation is to vary the track pitch accordingly in order to increase the recording density.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are not persuasive for the reasons stated above with respect to the parent claim.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 3 as stated above, and further in view of Sugaya et al.

The limitations of claim 7 are drawn to the track pitch limitation already presented by claim 5.

Sugaya et al discloses in this environment the ability of having an angled tapered wall for the pits, as well as the establishment of the track pitch within the range cited.

It would have been obvious to modify the base system relied upon with respect to claim 3, motivation is as stated above with respect to claim 5 increase the recording density.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 10-275369. See the mat (machine assisted translation) thereof, starting at paragraph 12.

This reference can also be relied upon for teaching the claimed taper angle limitation.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-F: 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
Art Unit 2627

A handwritten signature in black ink, appearing to be 'AMP', written over a horizontal line.

AMP